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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/820,215
Filing Date: April 07, 2004
Appellant(s): BENJAMIN ET AL.

Wendy A. Choi
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 21, 2007 appealing from the Office action mailed November 22, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The 112 2nd paragraph rejection of claims 25 and 54 and Claims 27-55 which were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting with copending Application No. 10/820,216.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

LIN et al., EP 0 778 023

Copending Serial No. 10/969,715

Copending Serial No. 10/961,871

Copending U.S. Patent No. 7,098,200

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-56 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The scope of the composition claims are not adequately enabled solely based on the inhibition of the excitatory amino acid receptors provided in the specification.

In evaluating the enablement question, several factors are to be considered. In re Wands, 8 USPQ2d 1400 (Fed. Cir. 1988); Ex parte Forman, 230 USPQ 546. The

factors include: 1) The nature of the invention, 2) the state of the prior art, 3) the predictability or lack thereof in the art, 4) the amount of direction or guidance present, 5) the presence or absence of working examples, 6) the breadth of the claims, and 7) the quantity of experimentation needed.

The nature of the instant invention has claims, which embrace substituted 8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl compounds.

HOW TO USE: Claims 1-9 and 26-41 are to a pharmaceutical composition for the treatment or prevention of any and all diseases and/or conditions associated with excitatory amino acid receptor activity. Any evidence presented must be commensurate in scope with the claims and must clearly demonstrate the effectiveness of the claimed compounds. The scope of claims 10-23 and 42-56 includes diseases and/or conditions not even known at this time, which may be associated with excitatory amino acid inhibiting activity. While the treatment of cerebral ischemia has been linked with NMDA the art does not recognize use of such inhibitors as broad based drugs for treating all disorders instantly embraced.

It is difficult to treat many of the disorders claimed herein. Instant claim language embraces disorders not only for treatment but the prevention, which is not remotely enabled. It is presumed in the prevention of the diseases and/or disorders claimed herein there is a way of identifying those people who may develop a tolerance to opiate analgesia, etc. There is no evidence of record, which would enable the skilled artisan in the identification of the people who have the potential of becoming afflicted with the disorders claimed herein.

Where the utility is unusual or difficult to treat or speculative, the examiner has authority to require evidence that tests relied upon are reasonably predictive of in vivo efficacy by those skilled in the art. See *In re Ruskin*, 148 USPQ 221; *Ex parte Jovanovics*, 211 USPQ 907; MPEP 2164.05(a).

Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. Tossing out the mere germ of an idea does not constitute enabling disclosure. *Genentech Inc. v. Novo Nordisk* 42 USPQ2d 1001.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-26 stand rejected under 35 U.S.C. 102(b) as being anticipated by LIN et al., EP 0 778 023. Lin et al. teach the composition and method of use of the compounds of formula (I) where A is $-CH_2CH_2-$ and R_1, R_2 and R_3 is H. See page 3, lines 9-10.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 26 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 26-29 of copending Application No. 10/969,715. Although the conflicting claims are not identical, they are not patentably distinct from each other because the composition of formula (I) of the instant invention where R_1, R_2 and R_3 is H is embraced by the compositions of 10/969,715.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 27-56 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-95 and 104-108 of copending Application No. 10/961,871. Although the conflicting claims are not identical, they are not patentably distinct from each other because the composition of formula (I) of the instant invention where R_2 or R_3 is $-C(R_4)(R_5)-O-C(=O)-R_6$, $-C(R_4)(R_5)-$

O-C(=O)-O-R_6 or -C(R_4)(R_5)-O-C(=O)-N(R_7)-R_6 is embraced by the compositions of 10/961,871.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 21-24 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-34 of U.S. Patent No. 7,098,200. Although the conflicting claims are not identical, they are not patentably distinct from each other because the composition of formula (I) of the instant invention where R_1, R_2 and R_3 is H is embraced by the compositions of U.S. Patent No. 7,098,200 (10/267,159). This rejection, of record as a provisional rejection, has been changed to a non-provisional rejection as the Application No. 10/267,159 has matured into a patent, U.S. Patent No. 7,098,200. But for that, the rejection is the same as before.

(10) Response to Argument

With regards to the 35 U.S.C. § 112, first paragraph rejection of claims 1-56 labeled paragraph 1 of the last office action, the appellants' arguments have been fully considered, however they were not found persuasive. First the Appellants state that they have shown that there is a nexus between NMDA antagonists and the treatment of the diseases and/or disorders listed in the claims to support enablement of claims 1 to 56. A number of review articles submitted herewith provide a recognized correlation between antagonism at the NMDA receptors and the specified diseases and conditions set forth in the claims. However, the review articles of Wood, Heresco-Levy, Bergink and Brown are not prior art and thus do not exhibit the state of the art prior to the filing

of the instant application. While is is noted that the review articles of Parsons and McCulloch represent the state of the art at the time the application was filed they are both speculative at best to that which is enabled.

First the appellants stated that there is no reason to believe that a skilled artisan would doubt that the compounds of the invention would be useful in preventing opiate tolerance, especially in light of the fact that NMDA receptor antagonists are known to prevent the opiate analgesia tolerance as set forth in the Trujillo abstract, which the appellants state indicates that a decade of research establishes that "NMDA receptor antagonists have the ability to inhibit opiate tolerance". However, Trujillo is speculative at best concerning the inhibition of opiate tolerance and nowhere in the abstract does Trujillo indicate that NMDA receptor antagonists can prevent the tolerance of opiate analgesia as set forth in the claims.

Secondly the appellants stated that no other evidence has been presented that establishes that a skilled artisan would doubt the use of the compounds of the invention, which are NMDA receptor antagonists, would not be useful in the treatment of the listed diseases and conditions.

However, review articles provided by the appellants such as Brown et al., Current Topics in Medicinal Chemistry states that the study of NMDA antagonists in a variety of neuropathic pain models only suggests that they may be useful for treating the pathological conditions underlying neuropathic pain. While the specific diseases listed in claims 10, 13, 14, 16, 18, 20, 22, 24, 42, 44, 45, 47, 49, 51 and 53 have been indicated by the appellants to have a nexus with NMDA, this does not provide

enablement for those diseases and/or disorders listed. Not all diseases and/or disorders are treatable. Where structure sensitivity exists (in the pharmaceutical art) degree of testing must be representative of claims' scope. Note In re Fisher 166 USPQ 18; In re Surrey 151 USPQ 724. The recent journal article, i.e. Brown et al. (2006), provided by the appellant indicates that deleterious side effects observed with many of the compounds in clinical trials have raised the question if this is a mechanism-based effect, which cannot be overcome. Furthermore, Brown states that it appears that within the non-competitive class of NMDA receptor antagonists, the most potent compound (e.g., MK-801) are unsuitable for clinical use due to the side effect profile.

While Brown et al. indicate that the use of memantine, a clinically available (Parkinson's disease and more recently Alzheimer's disease) NMDA antagonist, has demonstrated a superior side-effect profile, but did not show efficacy in several models of clinical pain. Thus the uses being urged are not in currently available form based on the activity relied on and the specification provides only a starting point for further research. Note Genentech vs. Novo Nordisk 42 USPQ 2d 1001.

With regards to the 35 U.S.C. § 102(b) anticipation rejection of claims 1-26 by LIN et al., maintained in the last Office action, the appellants' amendments and remarks have been fully considered but they are not persuasive. The appellants stated that EP-B1-0,778,023 never discloses a product containing both rapamycin and EAA-090 that is administered intranasally. However, EP-B1-0,778,023 teaches the use of rapamycin intranasally and also discloses that the product contains an NMDA antagonist such as [2-(8,9-dioxo-2,6-diazabicyclo[5.2.0]non-l(7)-en-2-yl)ethyl] phosphonic acid (EAA-090).

The appellants also stated that while EP-B1-0,778,023 discloses that the rapamycin may be administered intranasally, it further indicates that the NMDA antagonist does not necessarily need to administered at the same time and that even if the rapamycin and the NMDA antagonist are administered at the same time, this does not necessarily require that the compounds administered in the same manner. However, EP-B1-0,778,023 does not state that they cannot be administered at the same time. The claim language of the instant invention is such that the composition and method of use are open ended and the present of additional active ingredients is not precluded from the composition as claimed herein.

It is herein acknowledged that the appellants failed to address the obviousness-type double patenting rejections set forth below. It is assumed that the appellants agree with them and will file terminal disclaimers at the appropriate time. The appellants requested in the previous response that the obviousness-type double patenting rejections be held in abeyance at this time, which is hereby granted.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

BLC Brenda Coleman

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